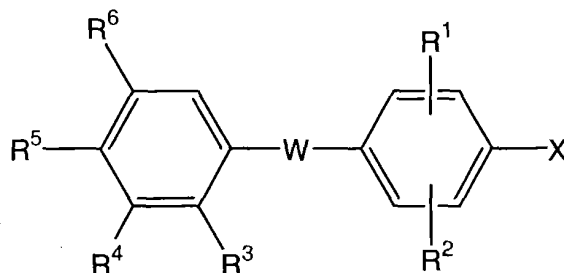


CLAIMS

1. A compound of Formula (I)



(I)

the stereoisomers and prodrugs thereof, and the pharmaceutically acceptable salts of said compounds, stereoisomers, and prodrugs, wherein:

W is oxygen, sulfur, -SO-, -S(O)₂-, -CH₂-, -CF₂-, -CHF-, -C(O)-, -CH(OH)-, -NR^a, or -C(=CH₂)-

10 R¹, R², R³, and R⁶ are each independently hydrogen, halogen, -(C₁-C₈)alkyl, -CF₃-, -OCF₃-, -O(C₁-C₈)alkyl, or -CN;

15 R⁴ is hydrogen, -(C₁-C₁₂)alkyl substituted with zero to three substituents independently selected from Group V, -(C₂-C₁₂)alkenyl, -(C₂-C₁₂)alkynyl, halogen, -CN, -OR^b, -SR^c, -S(O)R^c, -S(O)₂R^c, aryl, heteroaryl, -(C₃-C₁₀)cycloalkyl, heterocycloalkyl, -S(O)₂NR^cR^d, -C(O)NR^cR^d, -C(O)OR^c, -NR^aC(O)R^d, -NR^aC(O)NR^cR^d, -NR^aS(O)₂R^d, or -C(O)R^c; or

20 R³ and R⁴ are taken together along with the carbon atoms to which they are attached to form a carbocyclic ring of formula -(CH₂)_i- or a heterocyclic ring of formula -(CH₂)_k-Q-(CH₂)_i- wherein Q is oxygen, sulfur, or -NR^e-; i is 3, 4, 5, or 6; k is 0, 1, 2, 3, 4, or 5; and l is 0, 1, 2, 3, 4, or 5; and wherein said carbocyclic ring and said heterocyclic ring are each substituted with zero to four substituents independently selected from -(C₁-C₄)alkyl, -OR^b, oxo, -CN, phenyl, or -NR^aR^g;

R⁵ is hydroxy, -O(C₁-C₆)alkyl, -OC(O)R^f, fluorine, or -C(O)OR^c; or

25 R⁴ and R⁵ are taken together along with the carbon atoms to which they are attached to form a heterocyclic ring selected from the group consisting of -CR^c=CR^a-NH-, -N=CR^a-NH-, -CR^c=CR^a-O-, -CR^c=CR^a-S-, -CR^c=N-NH-, and -CR^a=CR^a-CR^a=N-;

R^a for each occurrence is independently hydrogen, or -(C₁-C₆)alkyl substituted with zero or one -(C₃-C₆)cycloalkyl or methoxy;

R^b for each occurrence is independently hydrogen, $-(C_1-C_{12})$ alkyl substituted with zero to three substituents independently selected from Group V, aryl, heteroaryl, $-(C_3-C_{10})$ cycloalkyl, heterocycloalkyl, $-C(O)NR^cR^d$, or $-C(O)R^f$;

R^c and R^d for each occurrence are each independently hydrogen, $-(C_1-C_{12})$ alkyl substituted with zero to three substituents independently selected from Group VI,
5 $-(C_2-C_{12})$ alkenyl, $-(C_2-C_{12})$ alkynyl, aryl, heteroaryl, $-(C_3-C_{10})$ cycloalkyl, or heterocycloalkyl;

provided that when R^d is the moiety $-SR^c$, $-S(O)R^c$, or $-S(O)_2R^c$, R^c is other than hydrogen; or

R^c and R^d are taken together along with the atom(s) to which they are attached to form a 3-10 membered heterocyclic ring which may optionally contain a second heterogroup selected from oxygen, $-NR^e$, or sulfur; and wherein said heterocyclic ring is substituted with zero to four substituents independently selected from $-(C_1-C_4)$ alkyl, $-OR^b$, oxo, $-CN$, phenyl, or $-NR^aR^g$;

R^e for each occurrence is hydrogen, $-CN$, $-(C_1-C_{10})$ alkyl substituted with zero to three substituents independently selected from Group V, $-(C_2-C_{10})$ alkenyl, $-(C_2-C_{10})$ alkoxy, $-(C_3-C_{10})$ cycloalkyl, aryl, heteroaryl, $-C(O)R^f$, $-C(O)OR^f$, $-C(O)NR^aR^f$, or $-S(O)_2R^f$;

R^f for each occurrence is independently $-(C_1-C_{10})$ alkyl substituted with zero to three substituents independently selected from Group VI, $-(C_2-C_{12})$ alkenyl, $-(C_2-C_{10})$ alkynyl, $-(C_3-C_{10})$ cycloalkyl, aryl, heteroaryl, or heterocycloalkyl;

R^g for each occurrence is independently hydrogen, $-(C_1-C_6)$ alkyl, $-(C_2-C_6)$ alkenyl, aryl, $-C(O)R^f$, $-C(O)OR^f$, $-C(O)NR^aR^f$, $-S(O)_2R^f$, or $-(C_3-C_8)$ cycloalkyl;

Group V is halogen, $-CF_3$, $-OCF_3$, $-OH$, oxo, $-(C_1-C_6)$ alkoxy, $-CN$, aryl, heteroaryl, $-(C_3-C_{10})$ cycloalkyl, heterocycloalkyl, $-SR^f$, $-S(O)R^f$, $-S(O)_2R^f$, $-S(O)_2NR^aR^f$,
25 $-NR^aR^g$, or $-C(O)NR^aR^f$;

Group VI is halogen, hydroxy, oxo, $-(C_1-C_6)$ alkoxy, aryl, heteroaryl, $-(C_3-C_8)$ cycloalkyl, heterocycloalkyl, $-CN$, or $-OCF_3$;

provided that when R^d is $-(C_1-C_{12})$ alkyl substituted with zero to three substituents independently selected from Group V, wherein said Group V substituent is oxo, said oxo group is substituted on a carbon atom other than the C_1 carbon atom in $-(C_1-C_{12})$ alkyl;

aryl for each occurrence is independently phenyl or naphthyl substituted with zero to four substituents independently selected from halogen, $-(C_1-C_6)$ alkyl, $-CN$, -

SR^f , $-\text{S(O)}\text{R}^f$, $-\text{S(O)}_2\text{R}^f$, $-(\text{C}_3\text{-C}_6)\text{cycloalkyl}$, $-\text{S(O)}_2\text{NR}^a\text{R}^f$, $-\text{NR}^a\text{R}^g$, $-\text{C(O)}\text{NR}^a\text{R}^f$, $-\text{OR}^b$, $-\text{perfluoro-(C}_1\text{-C}_4\text{)alkyl}$, or $-\text{COOR}^f$;

provided that when said substituent(s) on aryl are $-\text{SR}^f$, $-\text{S(O)}\text{R}^f$, $-\text{S(O)}_2\text{R}^f$, $-\text{S(O)}_2\text{NR}^a\text{R}^f$, $-\text{NR}^a\text{R}^g$, $-\text{C(O)}\text{NR}^a\text{R}^f$, $-\text{OR}^b$, or $-\text{COOR}^f$, said substituents R^b , R^f , and R^g ,
5 are other than aryl or heteroaryl;

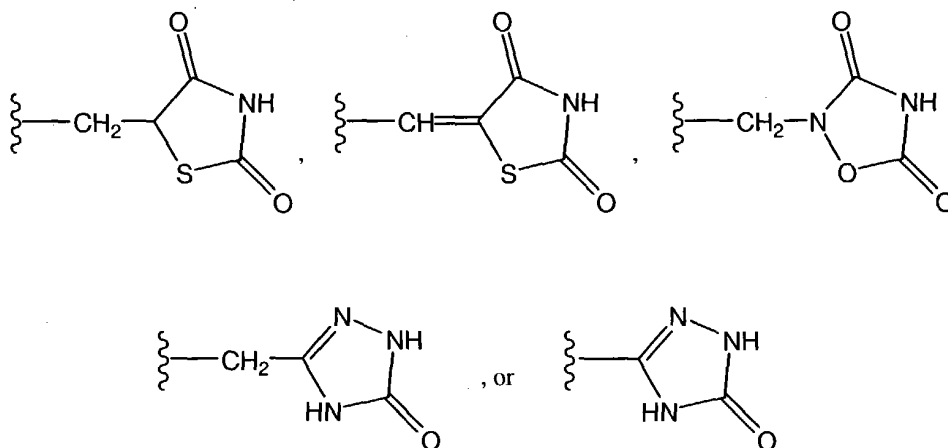
heteroaryl for each occurrence is independently a 5-, 6-, 7-, 8-, or 9-membered monocyclic or bicyclic ring having from one to three heteroatoms selected from O, N, or S;

wherein in said bicyclic ring, a monocyclic heteroaryl ring is fused to a
10 benzene ring or to another heteroaryl ring, and having zero to three substituents independently selected from halogen, $-(\text{C}_1\text{-C}_4)\text{alkyl}$, $-\text{CF}_3$, $-\text{OR}^b$, $-\text{NR}^a\text{R}^g$, or $-\text{COOR}^f$;

provided that when said substituent(s) on heteroaryl are $-\text{NR}^a\text{R}^g$, $-\text{OR}^b$, or $-\text{COOR}^f$, said substituents R^b , R^f , and R^g , are other than aryl or heteroaryl;

heterocycloalkyl for each occurrence is independently a 5-, 6-, 7-, 8-, or 9-
15 membered monocyclic or bicyclic cycloalkyl ring having from one to three heteroatoms selected from oxygen, $-\text{NR}^e$, or sulfur, and having zero to four substituents independently selected from $-(\text{C}_1\text{-C}_4)\text{alkyl}$, $-\text{OR}^b$, oxo, $-\text{CN}$, phenyl, or $-\text{NR}^a\text{R}^g$; and

X is



20

2. A compound according to claim 1 wherein W is oxygen.

25 3. A compound according to claim 1 wherein:

R¹ is located at the 3-position and R² is located at the 5-position, wherein R¹ and R² are each independently hydrogen, -(C₁-C₆)alkyl, halogen, or -CN;

R³ is hydrogen, -(C₁-C₄)alkyl or halogen;

5 R⁴ is -(C₁-C₁₀)alkyl substituted with zero to three substituents independently selected from fluoro, hydroxy, oxo, aryl, heteroaryl, -(C₃-C₈)cycloalkyl, or heterocycloalkyl, -S(O)₂NR^cR^d, -C(O)NR^cR^d, -S(O)₂R^c, -(C₃-C₈)cycloalkyl, heterocycloalkyl, -C(O)R^c, -OR^b, -SR^c, -S(O)R^c, -NR^aC(O)R^d, -NR^aC(O)NR^cR^d, or -NR^aS(O)₂R^d; or

10 R^c and R^d are taken together along with the atom(s) to which they are attached to form a 3-10 membered heterocyclic ring which may optionally contain a second heterogroup selected from oxygen, -NR^e-, or sulfur; and wherein the heterocyclic ring is substituted with zero to four substituents independently selected from -(C₁-C₄)alkyl, -OR^b, oxo, -CN, phenyl, or -NR^aR^g; or

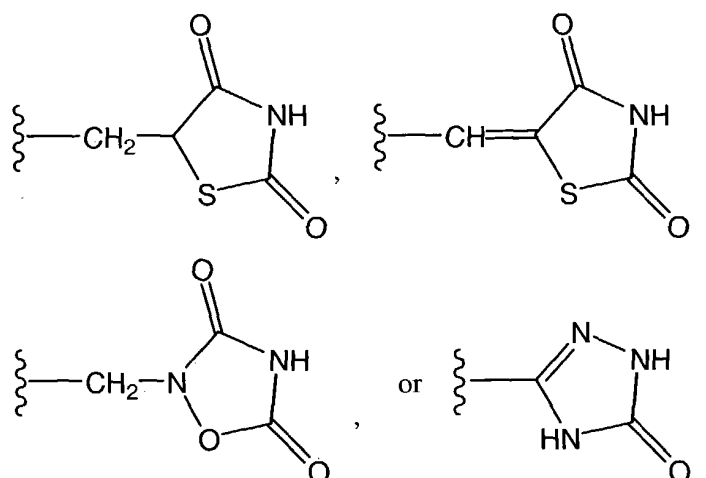
15 R³ and R⁴ are taken together along with the carbon atoms to which they are attached to form a carbocyclic ring of formula -(CH₂)_i- or a heterocyclic ring of formula -(CH₂)_k-Q-(CH₂)_l- wherein Q is -O-, -S- or -NR^e-; i is 3, 4, 5 or 6; k is 0, 1, 2, 3, 4 or 5; and l is 0, 1, 2, 3, 4 or 5; and wherein said carbocyclic ring and said heterocyclic ring are each substituted with zero to four substituents independently selected from -(C₁-C₄)alkyl, -OR^b, oxo, -CN, phenyl, or -NR^aR^g;

20 provided that when R⁴ is -(C₁-C₁₀)alkyl substituted with zero to three substituents, said oxo group is substituted on a carbon atom other than the C₁ carbon atom in -(C₁-C₁₀)alkyl;

R⁵ is -OH, -OC(O)R^f, -C(O)OR^c, or -F; wherein R^f is -(C₁-C₁₀)alkyl substituted with zero to three substituents independently selected from Group VI;

25 R⁶ is hydrogen, halogen or -(C₁-C₄)alkyl; and

X is



4. A compound according to claim 3 wherein

R^1 and R^2 are each independently hydrogen, $-(C_1-C_6)$ alkyl, halogen, or $-CN$;

5 R^3 is hydrogen;

R^4 is $-(C_1-C_{10})$ alkyl substituted with zero to three substituents independently selected from fluoro, hydroxy, oxo, aryl, heteroaryl, $-(C_3-C_8)$ cycloalkyl, or heterocycloalkyl, $-S(O)_2NR^cR^d$, $-C(O)NR^cR^d$, $-S(O)_2R^c$, $-(C_3-C_8)$ cycloalkyl, heterocycloalkyl, $-C(O)R^c$, $-OR^b$, $-SR^c$, $-S(O)R^c$, $-NR^aC(O)R^d$, $-NR^aC(O)NR^cR^d$, or $-NR^aS(O)_2R^d$; or

10 R^c and R^d are taken together along with the atom(s) to which they are attached to form a 3-10 membered heterocyclic ring which may optionally contain a second heterogroup selected from oxygen, $-NR^e$, or sulfur; and wherein the heterocyclic ring is substituted with zero to four substituents independently selected from $-(C_1-C_4)$ alkyl, $-OR^b$, oxo, $-CN$, phenyl, or $-NR^aR^g$;

R^5 is $-OH$, fluoro, or $-OC(O)R^f$ wherein R^f is $-(C_1-C_{10})$ alkyl substituted with zero to three substituents independently selected from Group VI; and

R^6 is hydrogen.

20 5. A compound according to claim 4 wherein

R^1 and R^2 are both methyl, bromo, or chloro;

R^4 is $-(C_1-C_{10})$ alkyl, substituted with zero to two substituents independently selected from fluoro, hydroxy, oxo, aryl, heteroaryl, $-(C_3-C_8)$ cycloalkyl, or heterocycloalkyl, $-S(O)_2NR^cR^d$, $-C(O)NR^cR^d$, $-S(O)_2R^c$, $-(C_3-C_8)$ cycloalkyl,

heterocycloalkyl, $-C(O)R^c$, $-OR^b$, $-SR^c$, $-S(O)R^c$, $-NR^aC(O)R^d$, $-NR^aC(O)NR^cR^d$, or $-NR^aS(O)_2R^d$; or

R^c and R^d are taken together along with the atom(s) to which they are attached to form a 3-10 membered heterocyclic ring which may optionally contain a
5 second heterogroup selected from oxygen, $-NR^e$, or sulfur; and wherein the heterocyclic ring is substituted with zero to four substituents independently selected from $-(C_1-C_4)alkyl$, $-OR^b$, oxo, $-CN$, phenyl, or $-NR^aR^g$; and

R^5 is $-OH$.

10 6. A compound selected from the group consisting of:

5-[3,5-dichloro-4-(4-hydroxy-3-isopropyl-phenoxy)-benzyl]-thiazolidine-2,4-dione;

5-[4-(4-hydroxy-3-isopropyl-phenoxy)-3,5-dimethyl-benzylidene]-thiazolidine-2,4-dione;

15 5-[4-(4-hydroxy-3-isopropyl-phenoxy)-3,5-dimethyl-benzyl]-thiazolidine-2,4-dione;

N-cyclopropyl-5-[2,6-dichloro-4-(2,4-dioxo-thiazolidin-5ylmethyl)-phenoxy]-2-hydroxy-benzenesulfonamide;

N-cyclobutyl-5-[2,6-dichloro-4-(2,4-dioxo-thiazolidin-5ylmethyl)-phenoxy]-2-hydroxy-N-methyl-benzamide;

20 2-[3,5-dichloro-4-(4-hydroxy-3-isopropyl-phenoxy)-benzyl]-[1,2,4]oxadiazolidine-3,5-dione;

2-[4-(3-isopropyl-4-methoxy-phenoxy)-3,5-dimethyl-benzyl]-[1,2,4]oxadiazolidine-3,5-dione;

25 2-[4-(4-hydroxy-3-isopropyl-phenoxy)-3,5-dimethyl-benzyl]-[1,2,4]oxadiazolidine-3,5-dione; and

5-[4-(4-hydroxy-3-isopropyl-phenoxy)-3,5-dimethyl-phenyl]-2,4-dihydro-[1,2,4]triazol-3-one, the stereoisomers and prodrugs thereof, and the pharmaceutically acceptable salts of said compounds, stereoisomers, and prodrugs.

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7. A method of treating a condition selected from the group consisting of obesity, overweight condition, hyperlipidemia, glaucoma, cardiac arrhythmias, skin disorders, thyroid disease, hypothyroidism, thyroid cancer, diabetes, atherosclerosis, hypertension, coronary heart disease, congestive heart failure, hypercholesteremia,

depression and osteoporosis, in a mammal which method comprises administering to said mammal a therapeutically effective amount of a compound of Formula (I), a stereoisomer or prodrug thereof, or a pharmaceutically acceptable salt of said compound, stereoisomer or prodrug, as defined in claim 1.

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8. A method according to claim 7 wherein said condition is obesity.

9. A method according to claim 7 wherein said condition is diabetes.

10 10. A method of inducing weight loss in a mammal which method comprises administering to said mammal a therapeutically effective amount of a compound of Formula (I), a stereoisomer or prodrug thereof, or a pharmaceutically acceptable salt of said compound, stereoisomer or prodrug, as defined in claim 1.

15 11. A method of increasing energy expenditure in a mammal which method comprises administering to said mammal a therapeutically effective amount of a compound of Formula (I), a stereoisomer or prodrug thereof, or a pharmaceutically acceptable salt of said compound, stereoisomer or prodrug, as defined in claim 1.

20 12. A method of treating a condition selected from the group consisting of obesity, overweight condition, hyperlipidemia, glaucoma, cardiac arrhythmias, skin disorders, thyroid disease, hypothyroidism, thyroid cancer, diabetes, atherosclerosis, hypertension, coronary heart disease, congestive heart failure, hypercholesteremia, depression and osteoporosis, which method comprises administering to a patient
25 having, or at risk of having, a condition selected from the group consisting of obesity, overweight condition, hyperlipidemia, glaucoma, cardiac arrhythmias, skin disorders, thyroid disease, hypothyroidism, thyroid cancer, diabetes, atherosclerosis, hypertension, coronary heart disease, congestive heart failure, hypercholesteremia, depression and osteoporosis, a therapeutically effective amount of:

30 1) a compound of Formula (I), a stereoisomer or prodrug thereof, or a pharmaceutically acceptable salt of said compound, stereoisomer or prodrug, as defined in claim 1; and

2) an additional compound useful for treating a condition selected from the group consisting of obesity, overweight condition, hyperlipidemia, glaucoma, cardiac

arrhythmias, skin disorders, thyroid disease, hypothyroidism, thyroid cancer, diabetes, atherosclerosis, hypertension, coronary heart disease, congestive heart failure, hypercholesteremia, depression and osteoporosis.

5 13. A method according to claim 12 wherein said condition is obesity.

14. A method according to claim 12 wherein said additional compound is a lipase inhibitor.

10 15. A method according to claim 14 wherein said lipase inhibitor is selected from the group consisting of lipstatin, tetrahydrolipstatin, FL-386, WAY-121898, Bay-N-3176, valilactone, esterastin, ebelactone A, ebelactone B and RHC 80267.

15 16. A method according to claim 12 wherein said additional compound is an anorectic agent.

17. A method according to claim 16 wherein said anorectic agent is selected from the group consisting of phentermine, sibutramine, fenfluramine, dexfenfluramine and bromocriptine.

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18. A pharmaceutical composition comprising a compound of Formula (I), a stereoisomer or prodrug thereof, or a pharmaceutically acceptable salt of said compound, stereoisomer or prodrug, as defined in claim 1.

25 19. A kit for treating a condition selected from the group consisting of obesity, overweight condition, hyperlipidemia, glaucoma, cardiac arrhythmias, skin disorders, thyroid disease, hypothyroidism, thyroid cancer, diabetes, atherosclerosis, hypertension, coronary heart disease, congestive heart failure, hypercholesteremia, depression and osteoporosis, wherein said kit comprises:

30 a) a first pharmaceutical composition comprising a compound of Formula (I), a stereoisomer or prodrug thereof, or a pharmaceutically acceptable salt of said compound, stereoisomer or prodrug, as defined in claim 1;

b) a second pharmaceutical composition comprising an additional compound useful for treating a condition selected from the group consisting of obesity,

overweight condition, hyperlipidemia, glaucoma, cardiac arrhythmias, skin disorders, thyroid disease, hypothyroidism, thyroid cancer, diabetes, atherosclerosis, hypertension, coronary heart disease, congestive heart failure, hypercholesteremia, depression and osteoporosis; and

5 c) a container.

20. A pharmaceutical composition comprising a compound of Formula (I), a stereoisomer or prodrug thereof, or a pharmaceutically acceptable salt of said compound, stereoisomer or prodrug, as defined in claim 1; and

10 an additional compound useful to treat a condition selected from the group consisting of obesity, overweight condition, hyperlipidemia, glaucoma, cardiac arrhythmias, skin disorders, thyroid disease, hypothyroidism, thyroid cancer, diabetes, atherosclerosis, hypertension, coronary heart disease, congestive heart failure, hypercholesteremia, depression and osteoporosis.

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21. A composition according to claim 20 wherein said condition is obesity.

22. A composition according to claim 20 wherein said additional compound is a lipase inhibitor.

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23. A composition according to claim 22 wherein said lipase inhibitor is selected from the group consisting of lipstatin, tetrahydrolipstatin (orlistat), FL-386, WAY-121898, Bay-N-3176, valilactone, esterastin, ebelactone A, ebelactone B and RHC 80267.

25 24. A composition according to claim 20 wherein said additional compound is an anorectic agent.

25. A composition according to claim 24 wherein said anorectic agent is selected from the group consisting of phentermine, sibutramine, fenfluramine, dexfenfluramine
30 and bromocriptine.